REMARKS

The Office Action dated November 29, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 22-43 are currently pending in the application, of which claims 22, 34, and 43 are independent claims. Claims 22-34 and 36-43 have been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added. Claims 22-43 are respectfully submitted for consideration.

Claims 22-23, 27-29, 31-35, and 39-43 were rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0461314 of Feldman ("Feldman") in view of U.S. Patent No. 5,542,096 of Cygan et al. ("Cygan"). The Office Action admitted that Feldman fails to disclose or suggest all of the features of the claims, and cited Cygan to remedy certain of Fedman's deficiencies. Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in the cited art.

Claim 22, upon which claims 23-33 depend, is directed to an apparatus including a calibrator configured to calibrate the transmission or receiving power of a transmitter or receiver in a mobile communication network. The calibrator includes a summer connected to an antenna array of the transmitted or receiver. The summer is configured to sum transmission or reception signals. The calibrator also includes a common calibrator configured to calibrate the summed signals. The apparatus is configured to transmit or receive burst signals for the antenna array and the burst signals include a training sequence. The apparatus also includes a power control loop configured to

control the output power of the power amplifier. The power control loop contains a detector configured to detect the output of the power amplifier and a controller configured to control the detector so as to detect the output of the power amplifier only during a time of output of the training sequence using a time-window to activate the detector only during the training sequence and to stop the detection function of the detector during the other times. The apparatus is configured to control the power based on the detected output power. The apparatus further includes a power detection section configured to issue a control signal which is applied to a control input of the detector. The power detection section is configured to generate the control signal with a timing so as to operate the detector only when the power amplifier outputs the training sequence. The power detection section is configured to generate the control signal by providing a time delay between start of a burst signal and start of the control signal sufficient so as to open the detection function of the detector only when the first bits of the training sequence are occurring at the input of the detector, and to close the time window for detecting the power amplifier output signal at or before the occurrence of the last bits of the training sequence.

Claim 34, upon which claims 35-42 depend, is directed to a method including calibrating the power of a transmitter or receiver in a mobile communication network comprising an antenna array. The method also includes transmitting burst signals to, or receiving by, the antenna array, wherein the burst signals comprise a fixed training sequence, and the transmitter or receiver comprising a power amplifier. The method further includes calibrating the transmission or receiving power of the transmitter or

receiver, wherein the calibrating comprises summing transmission or reception signals of the antenna array, and commonly calibrating the summed signals. The method additionally includes controlling the output power of the power amplifier by a power control loop, wherein controlling includes detecting the output of the power amplifier in a controlled manner so as to detect the output of the power amplifier only during the time of output of the training sequence using a time-window to activate the detector only during the training sequence and to stop the detection function of the detector during the other times, and controlling the power based on the detected output power. The method further includes issuing a control signal which is applied to a control input of the detector. The issuing includes generating the control signal with a timing so as to operate the detector only when the power amplifier outputs the training sequence. The timing is configured to provide a time delay between start of a burst signal and start of the control signal sufficient so as to open the detection function of the detector only when the first bits of the training sequence are occurring at the input of the detector, and to close the time window for detecting the power amplifier output signal at or before the occurrence of the last bits of the training sequence

Claim 43 is directed to an apparatus including calibration means for calibrating the transmission or receiving power of a transmitter or receiver in a mobile communication network. The calibration means includes a summing means, connected to an antenna array of the transmitted or receiver, for summing transmission or reception signals, and a common calibrating means for calibrating the summed signals. The apparatus is configured to transmit or receive burst signals for the antenna array and the burst signals

include a training sequence. The apparatus also includes power control loop means for controlling the output power of the power amplifier, the power control loop containing a detector means for detecting the output of the power amplifier, and a control means for controlling the detector means so as to detect the output of the power amplifier only during a time of output of the training sequence using a time-window means for activating the detector means only during the training sequence and for stopping the detection function of the detector means during the other times. The apparatus is configured to control the power based on the detected output power. The apparatus further includes power detection means for issuing a control signal which is applied to a control input of the detector means. The issuing includes generating the control signal with a timing so as to operate the detector only when the power amplifier outputs the training sequence. The timing is configured to provide a time delay between start of a burst signal and start of the control signal sufficient so as to open the detection function of the detector only when the first bits of the training sequence are occurring at the input of the detector, and to close the time window for detecting the power amplifier output signal at or before the occurrence of the last bits of the training sequence

Certain embodiments of the present invention can advantageously provide control of a detector so as to detect an output of a power amplifier **only** during the time of output of a training sequence. This advantage may be achieved by using a time-window to activate the detector **only** during the training sequence.

Applicants respectfully submit that the combination of Feldman and Cygan fails to disclose or suggest all of the elements of any of the presently pending claims, and consequently fails to provide the above-identified critical and unobvious advantages.

Feldman generally relates to active array element amplitude stabilization. Feldman, however, as the Office Action admitted, fails to disclose or suggest (at least) the "power control loop" recited in claim 22, as well as its various recited features and limitations. The Office Action, accordingly, cited Cygan to remedy such deficiencies of Feldman.

Cygan generally relates to a method for a transmitter to compensate for varying loading without an isolator. More particularly, in Cygan a training signal 115 is input from a signal source to a point B 122 (see Figure 1 of Cygan), when variable gain stages 104, 105 are inactivated. According to column 5, lines 50-55, of Cygan, the "Deactivation of the variable gain stages is typically performed at the beginning of each training sequence, which may occur as often as once a time slot in a TDMA communication system." The training signal is used to measure and adjust the feedback loop phase parameters.

Figure 1 of Cygan illustrates a situation in which the training signal 115 is supplied via a separate line 115 to point B 122 so as to be applied, via block 106, to the amplifier 107 and via the feedback path 112, feedback element 111, to summer 102 (with the other input I being deactivated) and to point A 121, both points A and B being connected to the loop gain determiner 110. Thus, the training signal in Cygan seems to be a separate sequence.

Claim 22 recites, "a power detection section configured to issue a control signal which is applied to a control input of the detector, wherein the power detection section is configured to generate the control signal with a timing so as to operate the detector only when the power amplifier outputs the training sequence, wherein the power detection section is configured to generate the control signal by providing a time delay between start of a burst signal and start of the control signal sufficient so as to open the detection function of the detector only when the first bits of the training sequence are occurring at the input of the detector, and to close the time window for detecting the power amplifier output signal at or before the occurrence of the last bits of the training sequence." Applicants respectfully submit that the combination of references fails to disclose or suggest at least such features of claim 22.

These features were described in the original application's written description at page 11, line 27, to page 12, line 14, in particular regarding the provision of a time delay so as to open (and close) the detection time window at appropriate time points. These features, however, are not disclosed, suggested, or otherwise obvious in view of the art of record. Indeed, none of the cited art appears to disclose any such feature of providing a time delay so as to compensate time differences between start of a burst signal and start of detection. Thus, it is respectfully submitted that claim 22 is both novel and non-obvious with respect to the combination of Feldman and Cygan, and it is respectfully requested that the rejection of claim 22 be withdrawn.

Independent claims 34 and 43 each have their own respective scope. Nevertheless, each recites at least some similar features to those discussed above, and

claims 34 and 43 were not rejected separately from claim 22, but rather on the same grounds. Thus, it is respectfully requested that the rejections of claims 34 and 43 be withdrawn for similar reasons to those discussed above.

Claims 23, 27-29, 31-33, 35, and 39-42 depend respectively from, and further limit, claims 22 and 34. Thus, each of claims 23, 27-29, 31-33, 35, and 39-42 recites subject matter that is neither disclosed nor suggested in the combination of Feldman and Cygan. It is, therefore, respectfully requested that the rejection of claims 23, 27-29, 31-33, 35, and 39-42 be withdrawn.

Claims 24-26, 30, and 36-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Feldman in view of Cygan and further in view of U.S. Patent Application Publication No. 2002/0177417 of Visser ("Visser"). The Office Action acknowledged that the base combination of Feldman and Cygan fails to disclose the further recitations of the claims (which depend from claims discussed above), and cited Visser only with respect to such further limitations. Applicants respectfully traverse this rejection.

Claims 24-26, 30 and 36-38 depend respectively from, and further limit, claims 22 and 34. At least some of the deficiencies of the combination of Feldman and Cygan with respect to claims 22 and 34 are discussed above. Since Visser was cited for other things, it is unsurprising that Visser does not remedy the above-identified deficiencies of Feldman and Cygman, whether or not it remedies the further deficiencies admitted in the Office Action.

Visser generally relates to a transmit/receive switch for an RF transceiver. Visser appears to be aimed primarily at addressing a situation of antenna failure due to breaking off of the antenna (see paragraph [0007] of Visser). Thus, Visser naturally cannot remedy the above-identified deficiencies of Feldman and Cygman.

Furthermore, there is no particular reason, suggesting itself to one of ordinary skill in the art, to combine any one or more of the teachings of Visser with those of Feldman and Cygman. The Office Action asserted that it would have been obvious to incorporating the teachings of Visser into the combination of Feldman and Cygman to avoid "component break through or other problems." The features of Visser, however, that the Office Action attempts to combine with Feldman and Cygman do not appear to be directly related to Visser's alleged attempted solution of "component break through." Indeed, some of the features cited from Visser appear in Visser's "Background" section, which suggests that they are not related to Visser's solution.

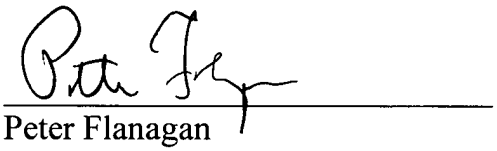
In any event, since Visser cannot remedy the deficiencies of Feldman and Cygman, the combination of Feldman, Cygman, and Visser fails to disclose or suggest all of the elements of any of the presently claims, including claims 22 and 34, upon which claims 24-26, 30 and 36-38 respectively depend. Thus, it is respectfully requested that the rejection of claims 24-26, 30 and 36-38 be withdrawn.

For the reasons set forth above, it is respectfully submitted that each of claims 22-43 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that each of claims 22-43 be allowed, and that this application be passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Peter Flanagan
Registration No. 58,178
(Attorney for Applicants)

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

PCF/cqc

Enclosures: Petition for Extension of Time
Check No. 018442